AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A storage and reproduction system for carrying out storage processing and reproduction processing of a transport stream in which coded data is multiplexed, said storage and reproduction system comprising:

a storage control device for, when a storage command is received, sequentially storing coded data in a storage device, said coded data corresponding to the storage command among inputted transport stream;

an auxiliary information generating device for analyzing said coded data for each access unit that is an access unit during random reproduction, and generating auxiliary information containing recording position information contained in the storage device; and

a reproduction control device for, when a reproduction command under a predetermined reproduction condition is received, selectively determining the access unit that conforms to the reproduction condition as a reproduction target based on the auxiliary information, and reading out the access unit targeted for reproduction from the storage device, thereby configuring and outputting a reproduction transport stream~~.~~;

wherein said reproduction control device configures the reproduction transport stream by assigning each PES packet to the respective access units, and provides the reproduction transport stream with reproduction time information as a PTS of said PES packet, said reproduction time information being for specifying a time for reproducing said access unit targeted for reproduction.

2. (original): The storage and reproduction system according to claim 1, wherein the reproduction control device newly generates configuration information on a program contained

in the reproduction transport stream and the reproduction transport stream, and outputs the configuration information with the reproduction transport stream.

3. (original): The storage and reproduction system according to claim 1, wherein the reproduction control device newly generates time reference information on a program contained in the reproduction transport stream, and outputs the time reference information with the reproduction transport stream.

4. (cancelled).

5. (currently amended): The storage and reproduction system according to claim 43, wherein the reproduction transport stream is transmitted by the TS packet, and the reproduction control device generates the reproduction time information based on arrival time information assigned when the respective TS packets are stored.

6. (currently amended): The storage and reproduction system according to claim 43, wherein the reproduction control device generates the reproduction time information in consideration of a frame display replacement in an original video stream of the access unit.

7. (original): The storage and reproduction system according to claim 1, wherein the coded data is video data compressed and coded in accordance with an MPEG2 scheme, and the access unit targeted for reproduction contained in the reproduction transport stream is obtained as a single video sequence.

8. (original): The storage and reproduction system according to claim 1, wherein coded data on one or more programs having one or more components is multiplexed in the inputted transport stream, and the auxiliary information generating device selectively reconfigures a stream from the inputted transport stream according to designation of the program or component, and generates the auxiliary information where the access unit contained in the stream is defined as an analysis target.

9. (currently amended): The storage and reproduction system according to claim 43, wherein the reproduction control device updates a parameter that assigns a storage amount of a virtual input

buffer or a decode timing in the access unit targeted for reproduction by referring to a data amount of the access unit, which is targeted for reproduction and is transferred.

10. (original): The storage and reproduction system according to claim 9, wherein the reproduction control device outputs the reproduction transport stream by associating the update value of the parameter with the reproduction time information.

11. (cancelled).

12. (canceled).

13. (canceled).

14. (currently amended): A transport stream reproduction method for reading out a transport stream in which coded data is multiplexed and auxiliary information that contains recording position information of an access unit in a storage device, said access unit being a unit of access during random reproduction of the coded data, and for carrying out reproduction processing of the transport stream, said transport stream reproduction method comprising the processes of:

selectively determining the access unit that conforms to the reproduction condition as a reproduction target based on the auxiliary information when a reproduction command under a predetermined reproduction condition is received;

reading out the access unit targeted for reproduction from the storage device; and

configuring and outputting a reproduction transport stream.

wherein the process of configuring configures the reproduction transport stream by assigning each PES packet to the respective address units, and provides the reproduction transport stream with reproduction time information as a PTS of the PES packet, said reproduction time information being for specifying a time for reproducing the access unit targeted for reproduction.

15. (original): The transport stream reproduction method according to claim 14, further comprising the process of newly generating configuration information on a program contained in the reproduction transport stream and reproduction transport stream, wherein the process of

configuring and outputting a reproduction transport stream outputs the newly generated configuration information with the reproduction transport stream.

16. (original): The transport stream reproduction method according to claim 14, further comprising the process of newly generating time reference information on a program contained in the reproduction transport stream, wherein the process of configuring and outputting a reproduction transport stream outputs the newly generated time reference information with the reproduction transport stream.

17. (cancelled)

18. (currently amended): The transport stream reproduction method according to claim ~~17~~14, wherein the inputted transport stream is transmitted by the TS packet, and the process of generating reproduction time information generates the reproduction time information based on arrival time information assigned when the respective TS packets are stored.

19. (currently amended): The transport stream reproduction method according to claim ~~17~~14, wherein the process of generating reproduction time information generates the reproduction time information in consideration of a frame display replacement in an original video stream of the access unit.

20. (currently amended): The transport stream reproduction method according to claim ~~17~~14, further comprising the process of updating a parameter that assigns a storage amount of a virtual input buffer or a decode timing in the access unit targeted for reproduction by referring to a data amount of the access unit, which is targeted for reproduction and is transferred.

21. (original): The transport stream reproduction method according to claim 20, wherein the process of configuring and outputting a reproduction transport stream outputs the reproduction transport stream by associating an update value of the parameter with the reproduction time information.

22. (cancelled)

23. (new): The storage and reproduction system according to claim 1, wherein said predetermined reproduction condition is a special reproduction, and the access unit used for the special reproduction is a trick access unit, which corresponds to an I picture.

24. (new): The storage and reproduction system according to claim 23, wherein said trick access unit used for the special reproduction is determined in accordance with judgment of number of TS packet of a transport stream, acquirement of trick access unit auxiliary information based on the judged number, and calculation of reproduction interval ΔT based on reproduction timing of the trick access unit.

25. (new): The transport stream reproduction method according to claim 14, wherein said predetermined reproduction condition is a special reproduction, and the access unit used for the special reproduction is a trick access unit, which corresponds to an I picture.

26. (new): The transport stream reproduction method according to claim 25, wherein said trick access unit used for the special reproduction is determined in accordance with judgment of number of TS packet of a transport stream, acquirement of trick access unit auxiliary information based on the judged number, and calculation of reproduction interval ΔT based on reproduction timing of the trick access unit.